

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. APPLN. NO. 09/707,975
ATTORNEY DOCKET NO. Q61361

REMARKS

Claims 2-7, 9-16 and 18-27 have been examined on their merits. Claims 1, 8 and 17 were cancelled in the Rule 111 Amendment filed on June 17, 2004.

Claim 28 was not examined in the August 26, 2004 Final Office Action. Applicant's undersigned representative contacted the Examiner regarding claim 28, and the Examiner issued an Interview Summary record indicating that claim 28 was allowed. Applicant thanks the Examiner for indicating that claim 28 is allowed. A Statement of Substance of Interview is being filed concurrently with this Amendment.

The Patent Office objects to claims 7, 14, 15 and 24 as being dependent upon a rejected base claim. Applicant thanks the Patent Office for indicating that claims 7, 14, 15 and 24 would be allowed if rewritten in independent form. However, instead of rewriting claims 7, 14, 15 and 24 in independent form, Applicant respectfully traverses the prior art rejections for the reasons set forth below.

Claims 2-7, 9-16 and 18-28 are all the claims presently pending in the application.

1. Claims 2, 4-6, 9, 11-13, 18, 19 and 21-23 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Freimanis (U.S. Patent No. 4,042,786) and in further view of Balachandran *et al.* (U.S. Patent No. 6,324,268).

The initial burden of establishing that a claimed invention is *prima facie* obvious rests on the USPTO. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). To make its *prima facie* case

of obviousness, the USPTO must satisfy three requirements:

- a) The prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the artisan to modify a reference or to combine references. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988).
- b) The proposed modification of the prior art must have had a reasonable expectation of success, as determined from the vantage point of the artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 (Fed. Cir. 1991).
- c) The prior art reference or combination of references must teach or suggest all the limitations of the claims. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991); *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Alternatively, the motivation may be implicit from the prior art as a whole, rather than expressly stated. *Id.* Regardless of whether the USPTO relies on an express or an implicit showing of motivation, the USPTO is obligated to provide particular findings related to its conclusion, and those findings must be clear and particular. *Id.* A broad conclusionary statement, standing alone without support, is not “evidence.” *Id.*; *see also, In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

In addition, a rejection cannot be predicated on the mere identification of individual components of claimed limitations. *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Rather,

particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *Id.*

With respect to claim 5, the combination of AAPA, Freimanis and Balachandran *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in a frequency band for digital data signals at a time when a ringing signal is received. Neither AAPA, Freimanis nor Balachandran *et al.* excludes any detectable components from the frequency band for digital data signals. The signal in Freimanis is a conventional, high-voltage ringing signal with unavoidable disturbing harmonics in the digital data frequency band. *See, e.g.*, col. 2, lines 31-35 of Freimanis. Balachandran *et al.* disclose a conventional ringing signal, which would have the same unacceptable harmonics as the signal of Freimanis. As argued by the Patent Office in the ***Response to Arguments*** section of the Final Office Action, Balachandran *et al.* disclose increasing the start frequency band when a ring tone is detected and restricting the digital data band to avoid components of the ringing indication. However, the frequency restriction does not occur until *after* the ringing signal is received (“If the ring tone is present (block 84), then the voice communication processor 66 notifies the control processor....”). A disadvantageous consequence of Balachandran *et al.* is a loss of bandwidth for the digital data service resulting in lower DSL bitrates, and the need to retrain the DSL connection that implies temporary interruption of the digital data service. In contrast to the combination of AAPA, Freimanis and Balachandran *et al.*, claim 5 recites that the ringing signal comprises a spectrum that lacks detectable components in the frequency band used

for digital data signals *at the time* when the ringing signal is received. In contrast, Balachandran *et al.* clearly disclose that there will be detectable components in the digital data band, hence the required shifting of the digital data band upon receipt of a ringing signal. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that one of skill in the art would not be motivated to combine the three references. The AAPA, Freimanis and Balachandran *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis and Balachandran *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 5. Thus, Applicant submits that claim 5 is allowable, and further submit that claims 2, 4 and 6 are allowable as well, at least by virtue of their dependency from claim 5. Applicant respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 2, 4, 5 and 6.

With respect to claim 12, the combination of AAPA, Freimanis and Balachandran *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in a frequency band for digital data signals at a time

when a ringing signal is received. Neither AAPA, Freimanis nor Balachandran *et al.* excludes any detectable components from the frequency band for digital data signals. The signal in Freimanis is a conventional, high-voltage ringing signal with unavoidable disturbing harmonics in the digital data frequency band. *See, e.g.*, col. 2, lines 31-35 of Freimanis. Balachandran *et al.* disclose a conventional ringing signal, which would have the same unacceptable harmonics as the signal of Freimanis. As argued by the Patent Office in the *Response to Arguments* section of the Final Office Action, Balachandran *et al.* disclose increasing the start frequency band when a ring tone is detected and restricting the digital data band to avoid components of the ringing indication. However, the frequency restriction does not occur until *after* the ringing signal is received (“If the ring tone is present (block 84), then the voice communication processor 66 notifies the control processor....”). A disadvantageous consequence of Balachandran *et al.* is a loss of bandwidth for the digital data service resulting in lower DSL bitrates, and the need to retrain the DSL connection that implies temporary interruption of the digital data service. In contrast to the combination of AAPA, Freimanis and Balachandran *et al.*, claim 12 recites that the ringing signal comprises a spectrum that lacks detectable components in the frequency band used for digital data signals *at the time* when the ringing signal is received. In contrast, Balachandran *et al.* clearly disclose that there will be detectable components in the digital data band, hence the required shifting of the digital data band upon receipt of a ringing signal. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis and Balachandran *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis and Balachandran *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 12. Thus, Applicant submits that claim 12 is allowable, and further submit that claims 9, 11 and 13 are allowable as well, at least by virtue of their dependency from claim 12. Applicant respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 9, 11, 12 and 13.

With respect to claim 22, the combination of AAPA, Freimanis and Balachandran *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in a frequency band for digital data signals at a time when a ringing signal is received. Neither AAPA, Freimanis nor Balachandran *et al.* excludes any detectable components from the frequency band for digital data signals. The signal in Freimanis is a conventional, high-voltage ringing signal with unavoidable disturbing harmonics in the digital data frequency band. *See, e.g.*, col. 2, lines 31-35 of Freimanis. Balachandran *et al.* disclose a conventional ringing signal, which would have the same unacceptable harmonics as the signal of Freimanis. As argued by the Patent Office in the *Response to Arguments* section of

the Final Office Action, Balachandran *et al.* disclose increasing the start frequency band when a ring tone is detected and restricting the digital data band to avoid components of the ringing indication. However, the frequency restriction does not occur until after the ringing signal is received (“If the ring tone is present (block 84), then the voice communication processor 66 notifies the control processor....”). A disadvantageous consequence of Balachandran *et al.* is a loss of bandwidth for the digital data service resulting in lower DSL bitrates, and the need to retrain the DSL connection that implies temporary interruption of the digital data service. In contrast to the combination of AAPA, Freimanis and Balachandran *et al.*, claim 22 recites that the ringing signal comprises a spectrum that lacks detectable components in the frequency band used for digital data signals *at the time* when the ringing signal is received. In contrast, Balachandran *et al.* clearly disclose that there will be detectable components in the digital data band, hence the required shifting of the digital data band upon receipt of a ringing signal. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis and Balachandran *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis and Balachandran *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 22. Thus, Applicant submits that claim 22 is allowable, and further submit that claims 18, 19, 21 and 23 are allowable as well, at least by virtue of their dependency from claim 22. Applicant respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 18, 19, 21, 22 and 23.

2. Claims 3, 10 and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over AAPA in view of Freimanis and in further view of Balachandran *et al.* and Malerba *et al.* (U.S. Patent No. 4,189,626).

With respect to claim 3, the combination of AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals, as recited in claim 5 and included via dependency in claim 3. The discussion above with respect to the rejection of claim 5 over the combination of AAPA, Freimanis, Balachandran *et al.* is hereby incorporated by reference. As noted above with respect to claim 5, the signal in Freimanis is a conventional, high-voltage ringing signal with unavoidable disturbing harmonics in the digital data frequency band. *See, e.g.*, col. 2, lines 31-35 of Freimanis. Malerba *et al.* discloses receiving ringing signals of nearly 100 volts, which would have the same unacceptable harmonics as the signal of Freimanis. Thus, Applicant submits that the Patent Office cannot

fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 5, and included in claim 3 via dependency. Thus, Applicant submits that claim 3 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 3.

With respect to claim 10, the combination of AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals, as recited in claim 12 and included via dependency in claim 10. The discussion above with respect to the rejection of claim 12 over the combination of AAPA, Freimanis, Balachandran *et al.* is hereby incorporated by reference. As noted above with respect to claim 12, the signal in Freimanis is a conventional, high-voltage ringing signal with unavoidable disturbing harmonics in the digital data frequency band. *See, e.g.*, col. 2, lines 31-35 of

Freimanis. Malerba *et al.* discloses receiving ringing signals of nearly 100 volts, which would have the same unacceptable harmonics as the signal of Freimanis. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 12, and included in claim 10 via dependency. Thus, Applicant submits that claim 10 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 10.

With respect to claim 20, the combination of AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals, as recited in claim 22 and included via dependency in claim 20. The discussion above with respect to the rejection of claim 22 over the combination of AAPA, Freimanis, Balachandran *et al.* is hereby incorporated by reference. As noted above with respect to claim

22, the signal in Freimanis is a conventional, high-voltage ringing signal with unavoidable disturbing harmonics in the digital data frequency band. *See, e.g.*, col. 2, lines 31-35 of Freimanis. Malerba *et al.* discloses receiving ringing signals of nearly 100 volts, which would have the same unacceptable harmonics as the signal of Freimanis. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis, Balachandran *et al.* and Malerba *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 22, and included in claim 20 via dependency. Thus, Applicant submits that claim 20 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 20.

3. Claims 16 and 26 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over AAPA in view of Freimanis and in further view of Balachandran *et al.*, Williamson *et al.* (U.S. Patent No. 6,477,249) and Russell *et al.* (U.S. Patent No. 5,757,803).

With respect to claim 16, the combination of AAPA, Freimanis, Balachandran *et al.*, Williamson *et al.* and Russell *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals, as recited in claim 12 and included via dependency in claim 16. The discussion above with respect to the rejection of claim 12 over the combination of AAPA, Freimanis and Balachandran *et al.* is hereby incorporated by reference. Applicant submits that Williamson *et al.* and Russell *et al.* do not provide any disclosure that overcomes the deficiencies of the combination of AAPA, Freimanis and Balachandran *et al.* Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis, Balachandran *et al.*, Williamson *et al.* and Russell *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis, Williamson *et al.* and Russell *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 12, and included in claim 16 via dependency. Thus, Applicant submits that claim 16 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 16.

With respect to claim 26, the combination of AAPA, Freimanis, Balachandran *et al.*, Williamson *et al.* and Russell *et al.* fails to teach or suggest at least a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals, as recited in claim 22 and included via dependency in claim 26. The discussion above with respect to the rejection of claim 22 over the combination of AAPA, Freimanis and Balachandran *et al.* is hereby incorporated by reference. Applicant submits that Williamson *et al.* and Russell *et al.* do not provide any disclosure that overcomes the deficiencies of the combination of AAPA, Freimanis and Balachandran *et al.* Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis, Balachandran *et al.*, Williamson *et al.* and Russell *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis, Balachandran *et al.*, Williamson *et al.* and Russell *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 22, and included in claim 26 via dependency. Thus, Applicant submits that claim 26 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 26.

4. Claim 25 stands rejected under 35 U.S.C. § 103(a) as allegedly being as allegedly being unpatentable over AAPA in view of Freimanis and in further view of Balachandran *et al.* and Birck (U.S. Patent No. 3,591,728).

With respect to claim 25, the combination of AAPA, Freimanis, Balachandran *et al.* and Birck fails to teach or suggest at least a ringing indication signal that lacks detectable components in the frequency band for digital data signals, as recited in claim 22 and included via dependency in claim 25. The discussion above with respect to the rejection of claim 22 over the combination of AAPA, Freimanis and Balachandran *et al.* is hereby incorporated by reference. Applicant submits that Birck does not provide any disclosure that overcomes the deficiencies of the combination of AAPA, Freimanis and Balachandran *et al.* Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis, Balachandran *et al.* and Birck all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis and Birck fails to teach or suggest all of the claimed elements as arranged in claim 22,

and included in claim 25 via dependency. Thus, Applicant submits that claim 25 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 25.

5. Claim 27 stands rejected under 35 U.S.C. § 103(a) as allegedly being as allegedly being unpatentable over AAPA in view of Freimanis and in further view of Balachandran *et al.* and Tate *et al.* (U.S. Patent No. 6,400,803).

With respect to claim 27, the combination of AAPA, Freimanis, Balachandran *et al.* and Tate *et al.* fails to teach or suggest at least a ringing indication signal that lacks detectable components in the frequency band for digital data signals, as recited in claim 22 and included via dependency in claim 27. The discussion above with respect to the rejection of claim 22 over the combination of AAPA, Freimanis and Balachandran *et al.* is hereby incorporated by reference. Applicant submits that Tate *et al.* does not provide any disclosure that overcomes the deficiencies of the combination of AAPA, Freimanis and Balachandran *et al.* Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Furthermore, Applicant submits that AAPA, Freimanis, Balachandran *et al.* and Tate *et al.* all lack any teaching about the desirability of a ringing indication signal that has a voltage amplitude less than 30 V RMS and lacks detectable components in the frequency band for digital data signals at a time when a ringing signal is received. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

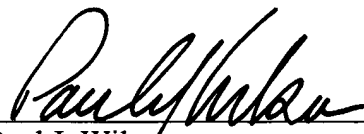
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Based on the foregoing reasons, Applicant submits that the combination of AAPA, Freimanis, Balachandran *et al.* and Tate *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 22, and included in claim 27 via dependency. Thus, Applicant submits that claim 27 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 27.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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